STATE OF MARYLAND

DHMH

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January 27, 2012

Public Health & Emergency Preparedness Bulletin: # 2012:03
Reporting for the week ending 01/21/12 (MMWR Week #03)

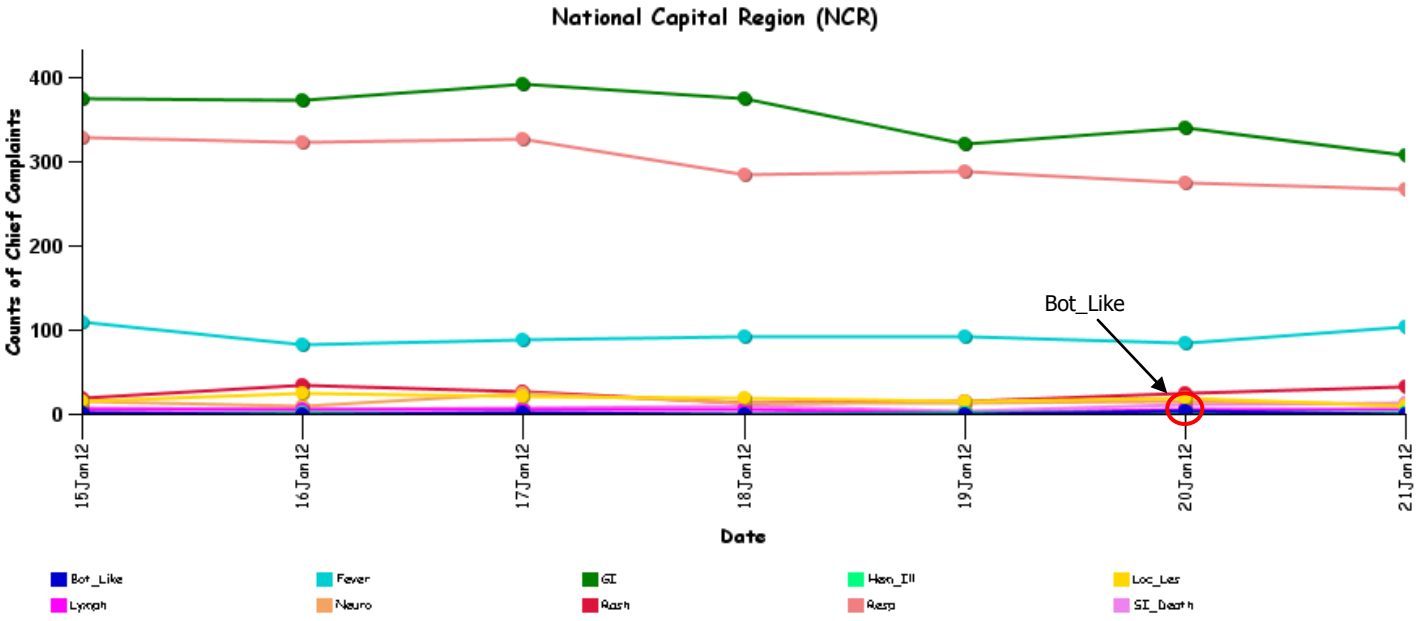
CURRENT HOMELAND SECURITY THREAT LEVELS

National: **No Active Alerts**
Maryland: **Level One (MEMA status)**

SYNDROMIC SURVEILLANCE REPORTS

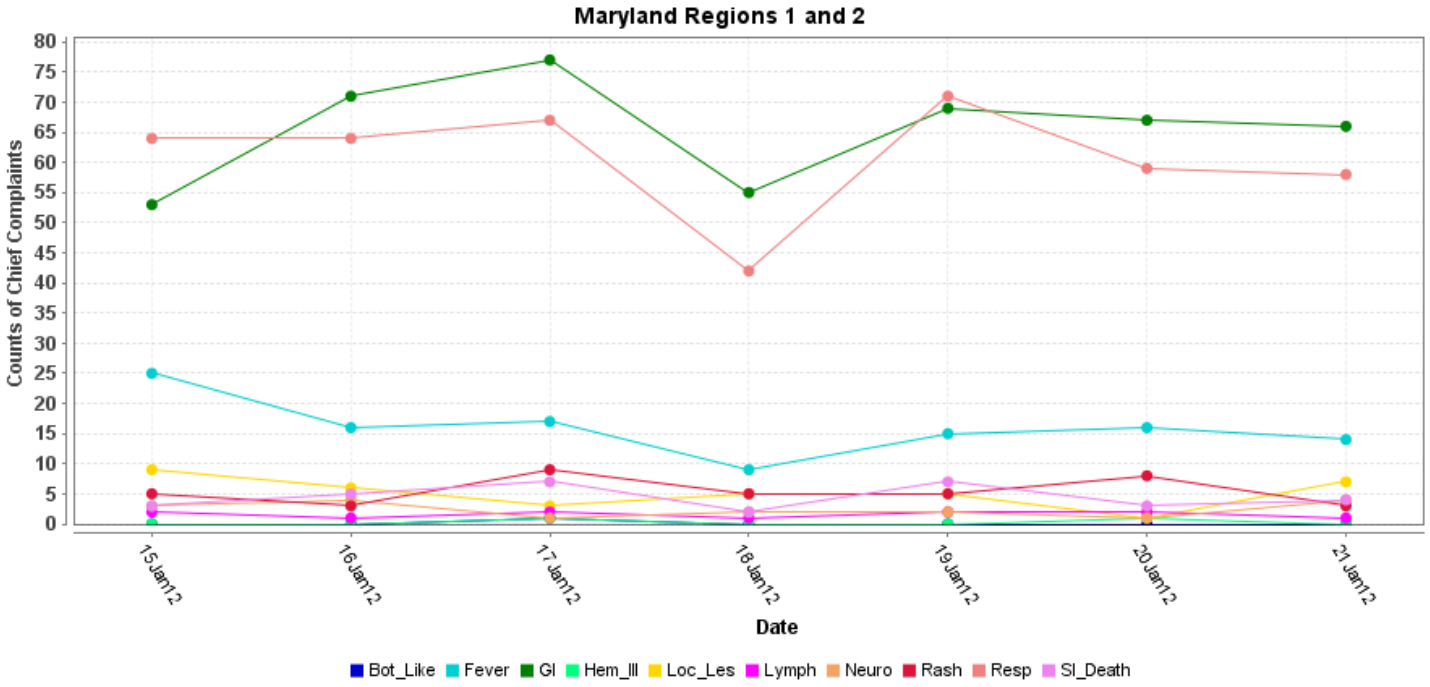
ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):
Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled. Red alerts are generated when observed count for a syndrome exceeds the 99% confidence interval. Note: ESSENCE – ANCR uses syndrome categories consistent with CDC definitions.

Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

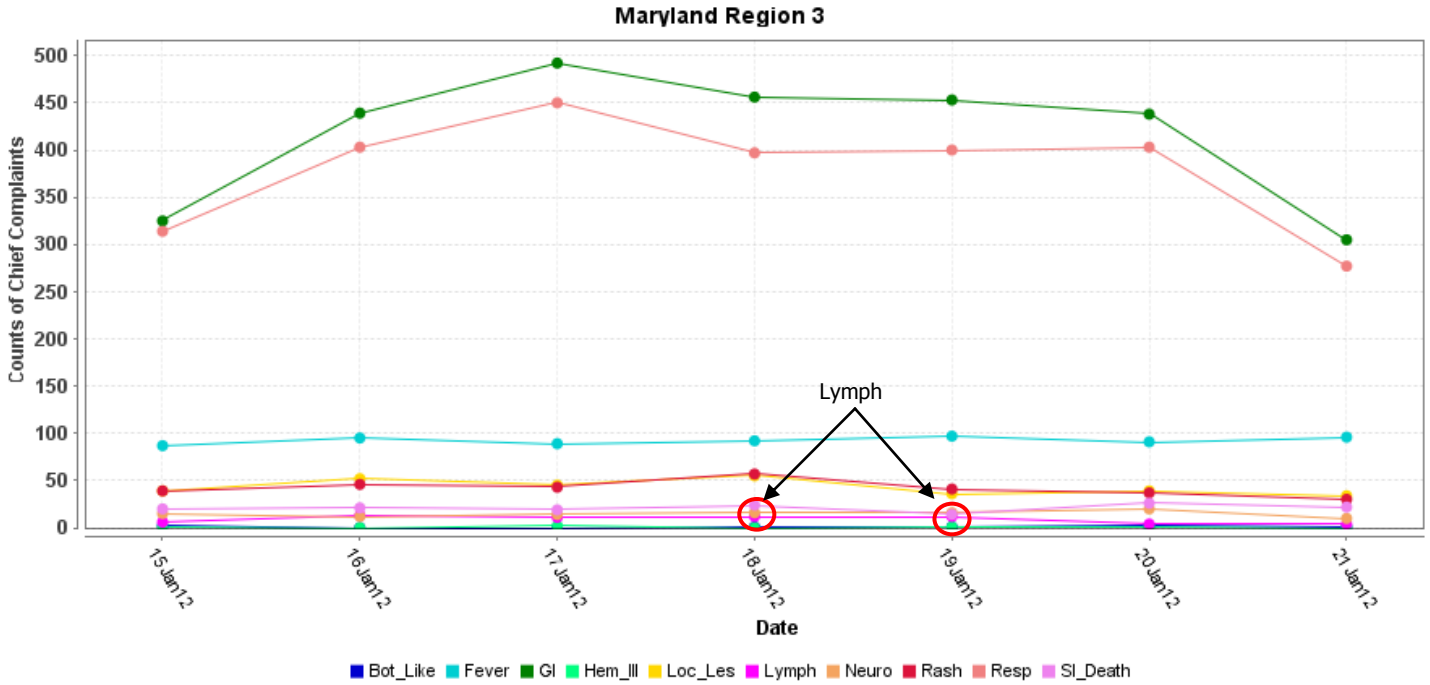


*Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE

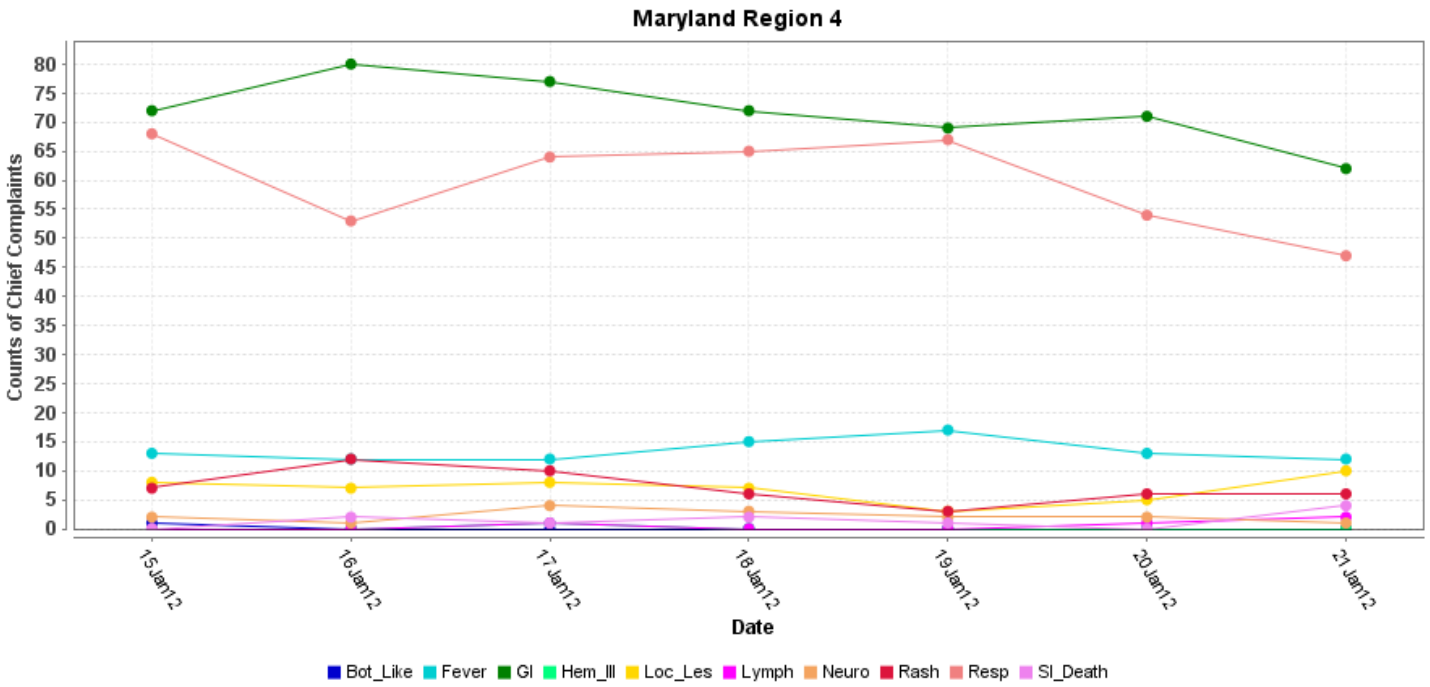
MARYLAND ESSENCE:



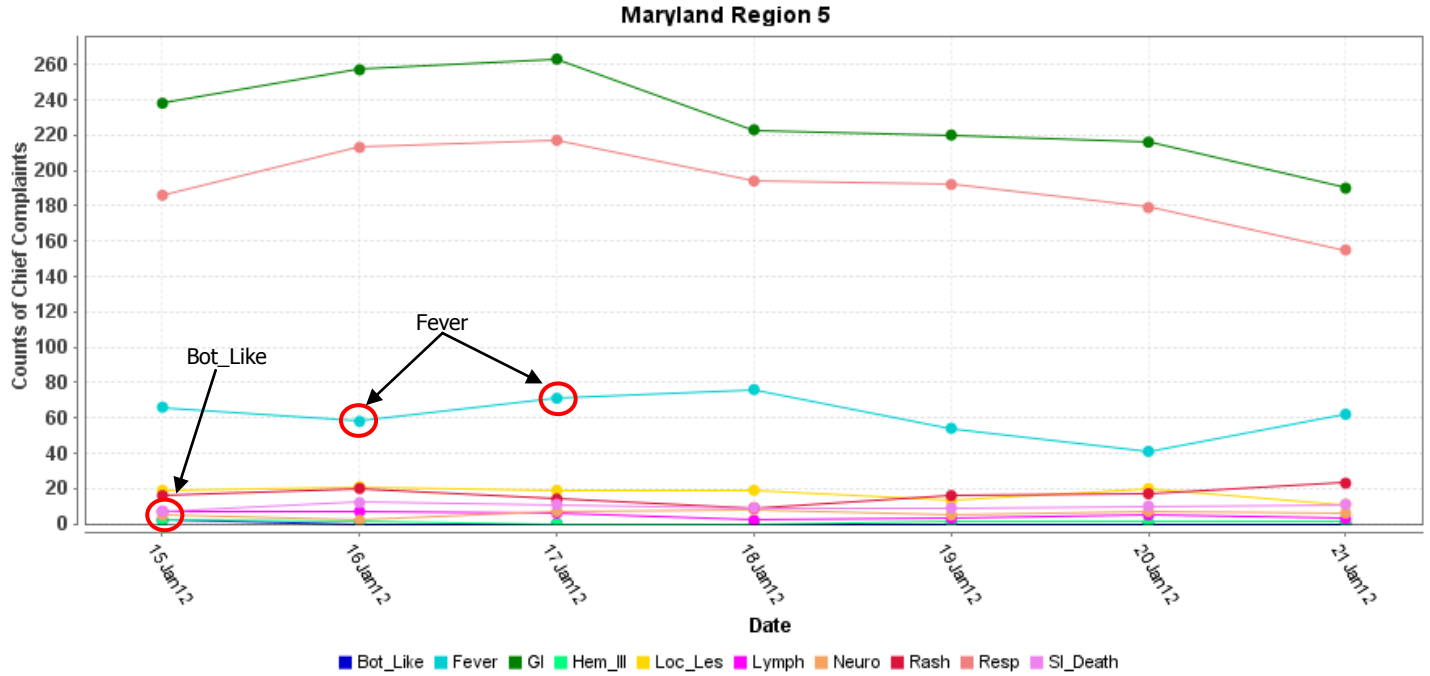
* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE



* Region 3 includes EDs in Anne Arundel, Baltimore City, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE



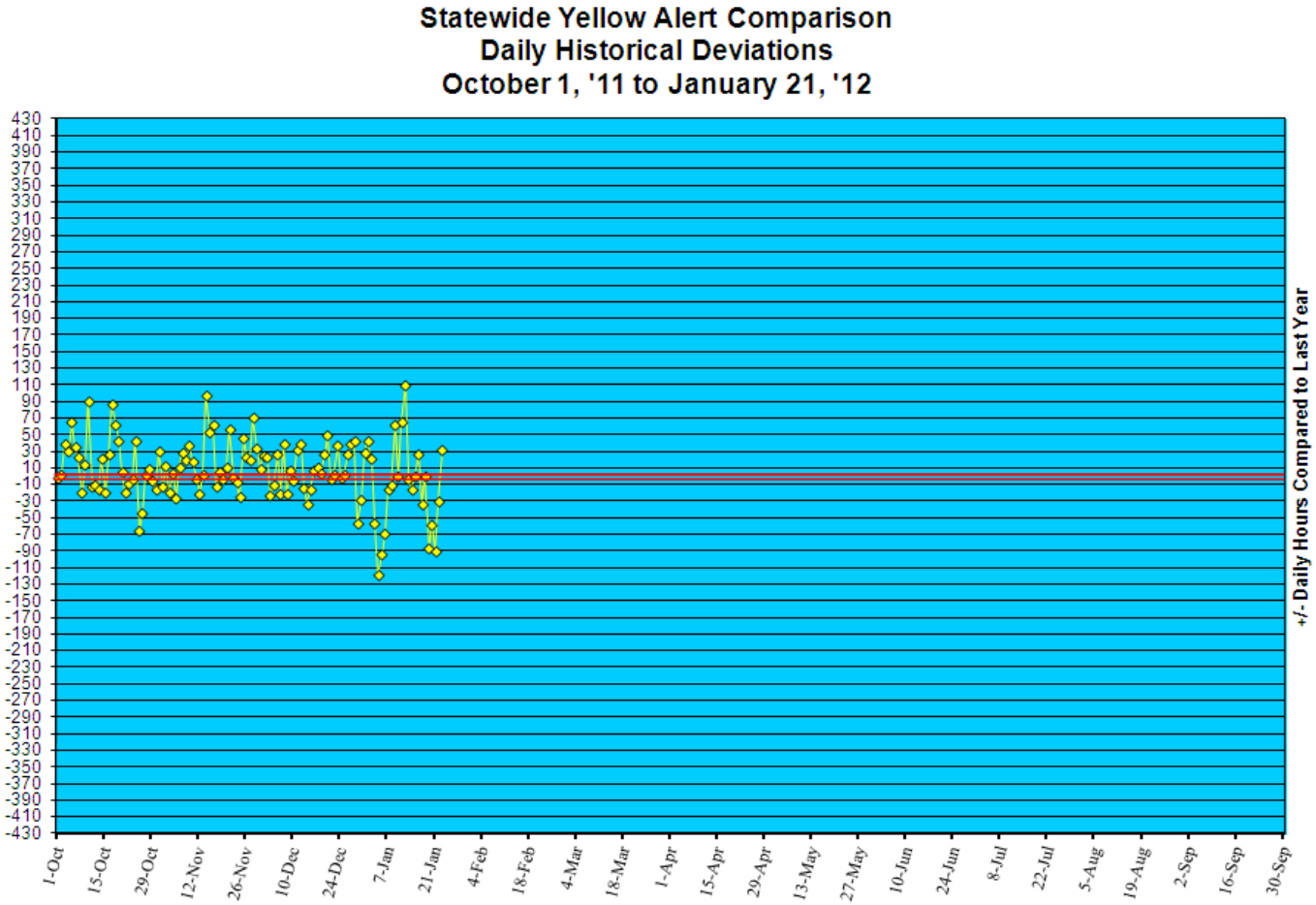
* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE



* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/11.



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to an emerging public health threat for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in December 2011 did not identify any cases of possible public health threats.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	**Aseptic**	**Meningococcal**
New cases (January 15 – January 21, 2012):	9	0
Prior week (January 8 – January 14, 2012):	17	0
Week#3, 2011 (January 16 – January 22, 2011):	12	0

11 outbreaks were reported to DHMH during MMWR Week 3 (January 15 – January 21, 2012)

9 Gastroenteritis outbreaks
5 outbreaks of GASTROENTERITIS in Nursing Homes
3 outbreaks of GASTROENTERITIS in Assisted Living Facilities
1 outbreak of GASTROENTERITIS in a School

1 Respiratory illness outbreak
1 outbreak of INFLUENZA in an Assisted Living Facility

1 Rash illness outbreak
1 outbreak of MRSA in a Daycare

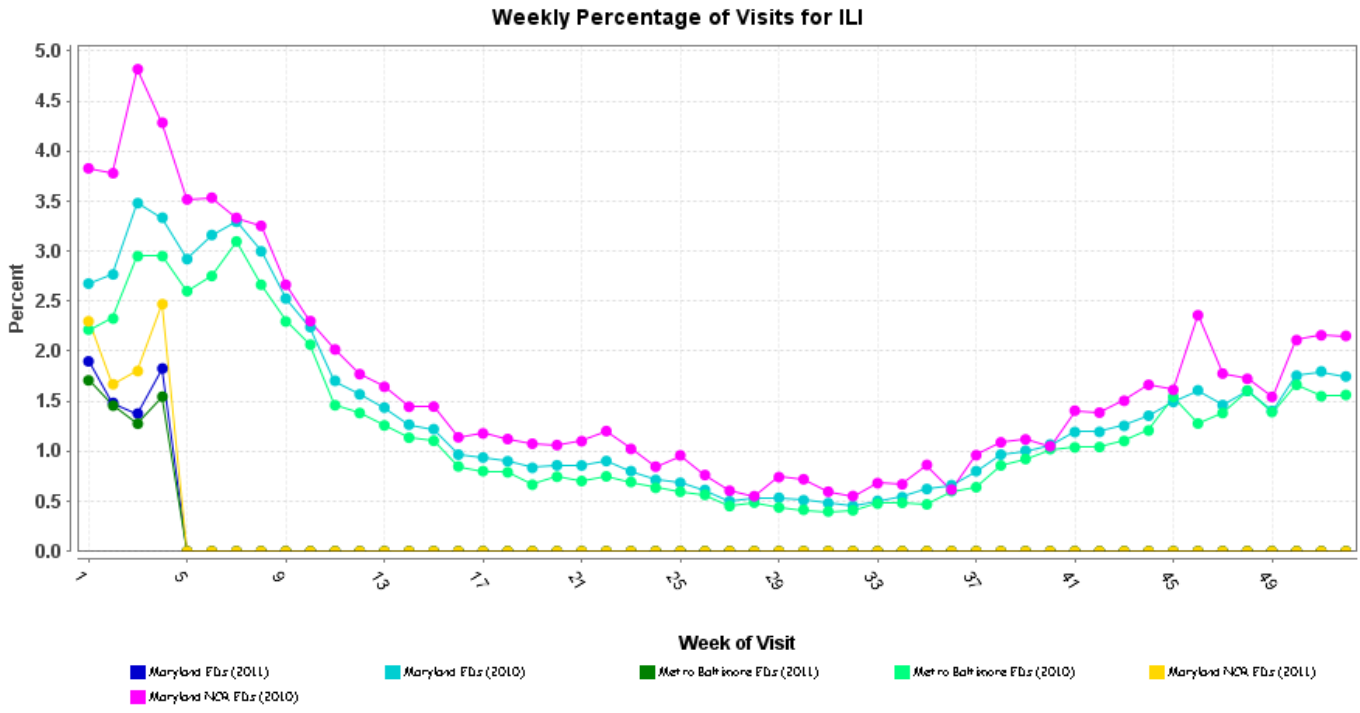
MARYLAND SEASONAL FLU STATUS

Seasonal Influenza reporting occurs October through May. Seasonal influenza activity for Week 3 was: No activity, Minimal Intensity.

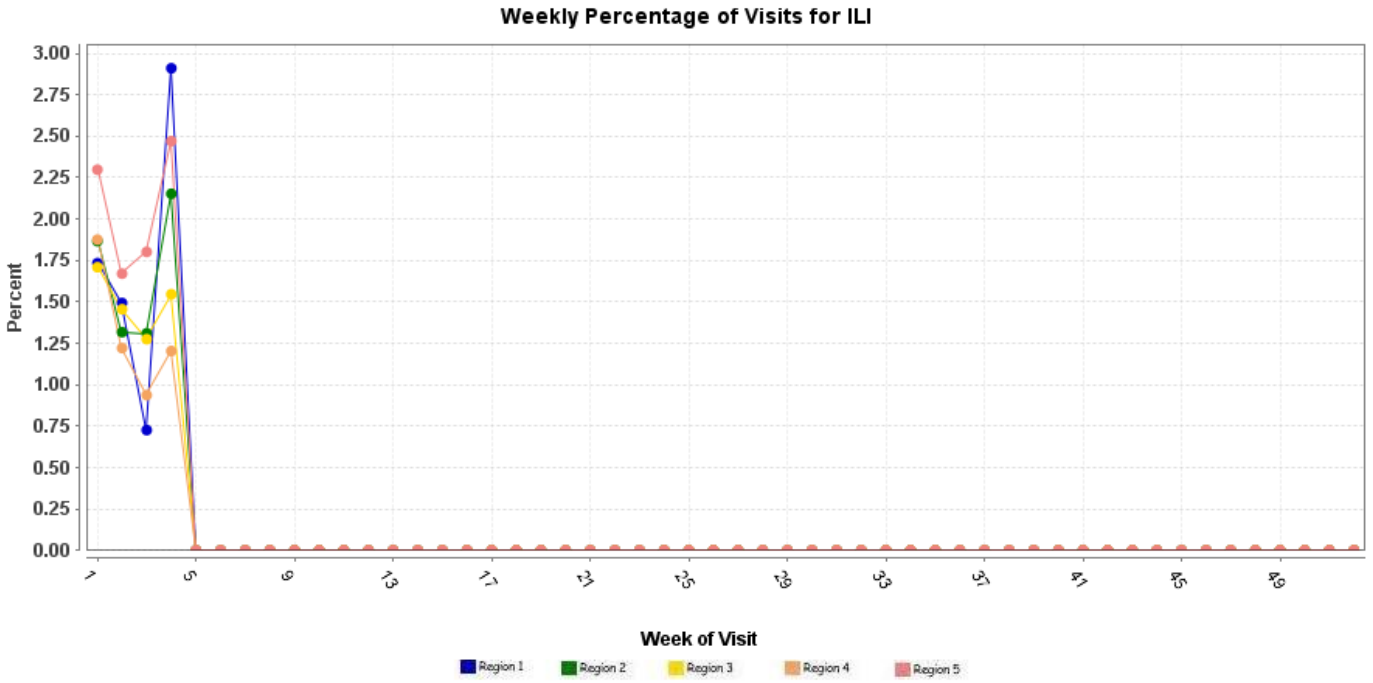
SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the week.



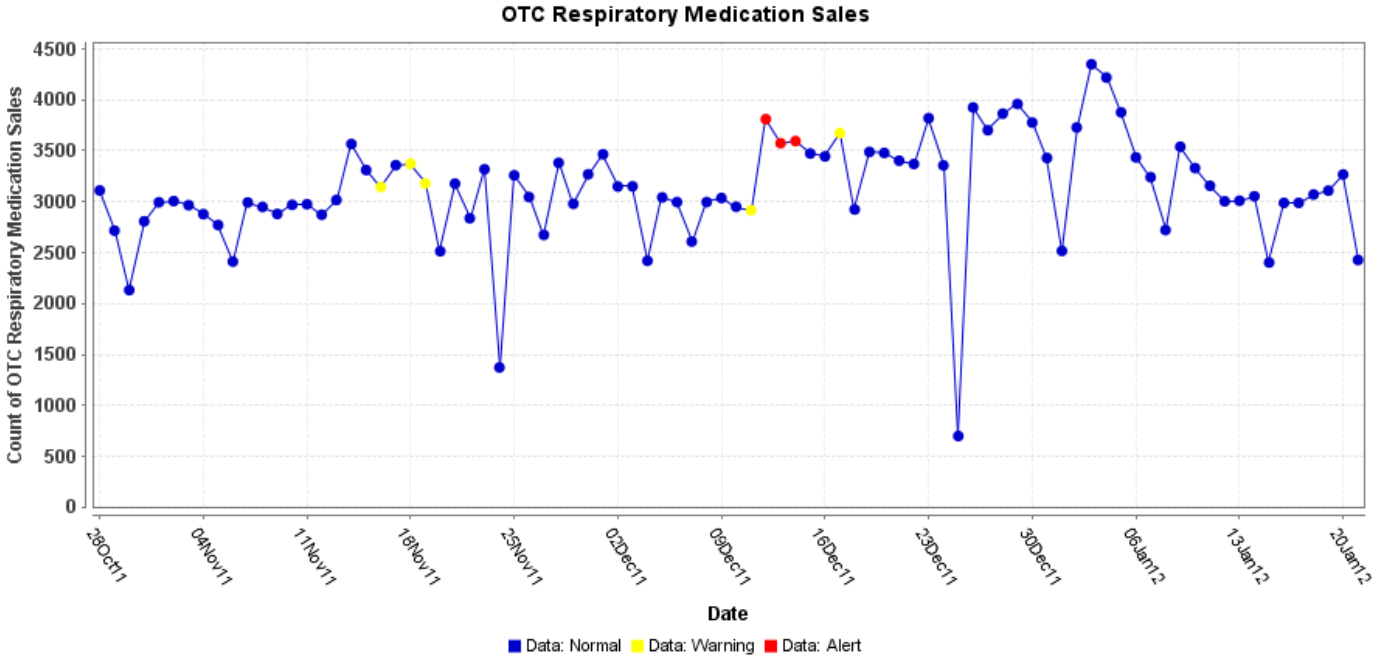
* Includes 2010 and 2011 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total



*Includes 2011 Maryland ED visits for ILI in Region 1, 2, 3, 4, and 5

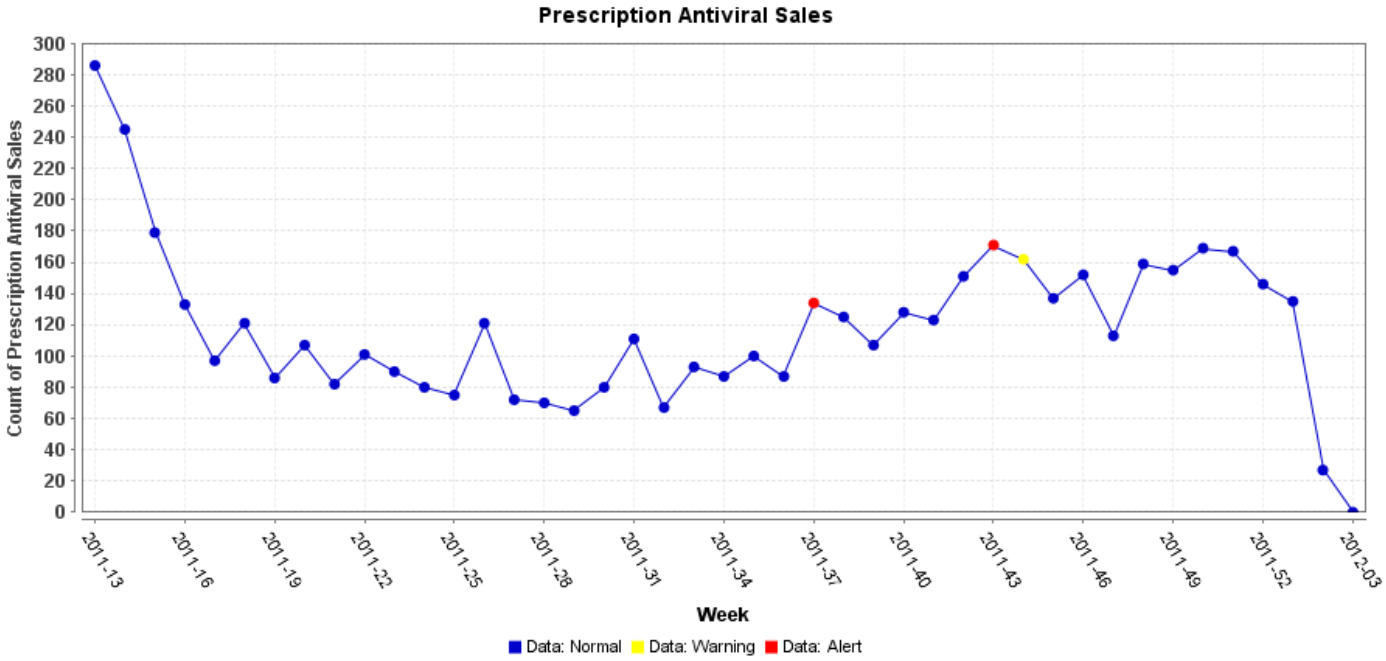
OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



PRESCRIPTION ANTIVIRAL SALES:

Graph shows the weekly number of prescription antiviral sales in Maryland.



PANDEMIC INFLUENZA UPDATE / AVIAN INFLUENZA-RELATED REPORTS

WHO update: The current WHO phase of pandemic alert for avian influenza is 3. Currently, the avian influenza H5N1 virus continues to circulate in poultry in some countries, especially in Asia and northeast Africa. This virus continues to cause sporadic human infections with some instances of limited human-to-human transmission among very close contacts. There has been no sustained human-to-human or community-level transmission identified thus far.

In **Phase 3**, an animal or human-animal influenza reassortant virus has caused sporadic cases or small clusters of disease in people, but has not resulted in human-to-human transmission sufficient to sustain community-level outbreaks. Limited human-to-human transmission may occur under some circumstances, for example, when there is close contact between an infected person and an unprotected caregiver. However, limited transmission under such restricted circumstances does not indicate that the virus has gained the level of transmissibility among humans necessary to cause a pandemic.

As of January 20, 2012, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 582, of which 343 have been fatal. Thus, the case fatality rate for human H5N1 is approximately 59%.

NATIONAL DISEASE REPORTS

BRUCELLOSIS (MASSACHUSETTS): 20 January, 2012, A man who drank raw milk produced at a Western Massachusetts dairy farm is suspected of being infected with brucellosis, state officials said today, 20 Jan 2012, raising concerns about the emergence of a germ that has not been seen in livestock here in at least 2 decades. Brucellosis is an infectious disease passed primarily between animals, but it can be acquired by humans through the consumption of raw milk. Officials from the state Department of Public Health said they are investigating Twin Rivers Farm in Ashley Falls as the possible source of the infection, because the infected man purchased raw milk there. The dairy sells raw milk only at the facility, not in retail stores, and officials urged anyone who bought raw milk there to discard it. The owners of Twin Rivers Farm could not be reached for comment. Raw milk is not pasteurized, a process that heats food to kill bacteria. Health officials stressed that pasteurized milk is safe to drink. Dr Alfred DeMaria, the state's top disease tracker, said the infected man, who was not identified because of patient confidentiality rules, is believed to have consumed the milk in late December 2011. But because the illness often starts with flu-like symptoms, it was difficult to pinpoint at first. "It can percolate along with fever, fatigue, muscle aches, and with nonspecific symptoms, and can be very difficult to diagnose," DeMaria said. "It's an astute physician that worked it out," he said, and alerted public health officials last night. The man is recovering and is at home, DeMaria said, and there have been no other reported human infections. Preliminary tests to confirm the infection are expected back next week. State agriculture officials have worked hard over the past half century to reduce brucellosis infections in livestock. Dr Eugene White, an associate professor at the Cummings School of Veterinary Medicine at Tufts University, said the disease is not widely contagious among farm animals, but in areas of the world where it is common, such as South America, it can significantly hamper a herd's ability to reproduce. "In regions of world that have this commonly, 10 to 25 per cent of cows will abort," he said. Dr Catherine Brown, the state's public health veterinarian, said the germ is not typically found in the USA, and particularly not in New England. "We have not seen the bacteria identified in a

Massachusetts animal in decades," Brown said. If the infection is confirmed, it will have "significant implications" for Massachusetts livestock, she said. "We will have to figure out how the organism got here, if other livestock was exposed, and if others are at risk," she said. William Gillmeister of the Massachusetts Department of Agricultural Resources said his agency has inspected Twin Rivers Farm and found it to be a well-run business with no history of problems. He said investigators are still trying to determine the source of the infection and are not certain that it is in the farm's raw milk, but the milk sales have been discontinued. Gillmeister said farms must obtain a permit from his department to sell raw milk. "We regularly test the milk to make sure it is safe," he said. The department and health officials are advising consumers who have purchased raw milk from Twin Rivers Farm to discard it, and anyone who believes they became ill from drinking raw milk should immediately seek medical attention and notify the local board of health or the state's Food Protection Program, at 617-983-6712. (Brucellosis is listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

E. COLI EHEC (MINNESOTA): 18 January 2012, A Minnesota high school science project that involved hunting and butchering deer, including a road-kill capture, and turning the meat into venison kabobs backfired when 29 students were sickened with a kind of *Escherichia coli* food poisoning, investigators say. The 2010 incident just now reported in the journal Emerging Infectious Diseases highlights the risks of *E. coli* contamination, not just from factory-processed meat, but also from small, local providers. Doctors first knew they had a problem in December 2010 when 2 kids from the same high school turned up at a Minnesota hospital with abdominal pain and bloody diarrhea. Fearing they had a food poisoning outbreak on their hands, they quickly called in the state's top-notch public health officials. Both teens had taken part in a school environmental science and outdoor recreation class that involving hunting, shooting, and butchering 6 white-tailed deer, explained Joshua Rounds, the study's lead author and an epidemiologist with the Minnesota Department of Public Health. A 7th deer was harvested after being hit by a car, the report says. The deer were processed on school grounds and then grilled and eaten in class a few weeks before the students got sick. Epidemiologists interviewed 117 kids in 5 class periods and found that 29 definitely had become ill, but not with *E. coli O157:H7*, the strain commonly associated with foodborne illness from ground beef. Samples from the students and the deer meat turned up *E. coli O103:H2*, which is part of a larger category of non-O157 Shiga toxin-producing *E. coli* bugs, known as STECs. People don't usually get sick from eating hunks or steaks of muscle meat, Rounds said. In this case, however, the meat had been skewered and cooked only to medium rare. The skewers had dragged contaminants from the meat's surface down to the center of the kabobs, which hadn't been cooked to a high enough temperature to kill the bacteria. Unless the entire hunk of meat is cooked to 165 deg F [74 deg C], there is a risk of food poisoning, Rounds said. Another factor was hand washing when handling meat, or the lack of it, Rounds said. Not everyone in the class was as fastidious about cleaning their hands as they could have been. "If you think about high school males, they're probably not the best when it comes to food safety practices," he said. "So you can have cross-contamination." The case is a reminder, Rounds said, that all meat, no matter where it comes from, should be treated with careful precautions. (Food Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

INTERNATIONAL DISEASE REPORTS

LEGIONELLOSIS (SPAIN): 19 January 2012, This alert advises of a possible outbreak of legionnaires' disease associated with a hotel in Calpe, Costa Blanca, Spain. In the last week the Health Protection Agency (HPA) has received notifications of four confirmed cases of legionnaires' disease and a probable fifth case associated with a hotel in this area. A further 16 possible cases are currently being investigated. The onset date of the probable case was 16th January and it is therefore possible for further cases to develop. Clinicians are reminded that legionnaires' disease is a notifiable disease and must be reported to the local authorities. They are also asked to consider: legionnaires' disease as a possible diagnosis in patients who may present with flu-like symptoms and/or lower respiratory tract symptoms and who have returned from Calpe, Costa Blanca in the last two weeks; arranging urinary antigen testing of all suspected cases. (Water Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

CRIMEAN-CONGO HEMORRHAGIC FEVER (OMAN): 21 January 2012, An expatriate woman has died of haemorrhagic Congo fever [Crimean-Congo haemorrhagic fever virus infection] at Al Buraimi Hospital, according to an official at the Ministry of Health. The Oman News Agency, quoting an unnamed ministry official, reported that the woman was admitted to the government hospital in Buraimi last Wednesday [18 Jan 2012]. "All necessary procedures were followed in such cases of communicable diseases, but the woman died in the midnight due to her late arrival at the hospital," the health ministry official said. The pathogenic virus, especially common in East and West Africa, is a widespread tickborne viral disease, a zoonosis of domestic animals and wild animals that may affect humans, with a mortality rate of almost 30 per cent. The Health Ministry official said that epidemic detection teams in the country continue to take precautions and are liaising with the departments concerned such as the Ministry of Agriculture and Fisheries and the Ministry of Regional Municipalities and Water Resources to get to the root of the cause of disease. The official, who stressed that the viral fever was not widespread, urged the public not to panic and spread false information through social media without authentic information. (Viral Hemorrhagic Fevers are listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

CHOLERA (CONGO): 16 January, 2012, A fresh cholera outbreak is threatening the lives of thousands of people in the Democratic Republic of the Congo (DRC). The waterborne epidemic has struck South Kivu, capital of Bukavu Province, which has a population of over 4.5 million people. More than 1600 confirmed cases with at least 14 deaths have been reported since last week. Last year, nearly 19 000 cases were also reported with more than 200 deaths from another cholera outbreak. Factors such as poor hygiene and little access to safe drinking water contribute to the outbreaks. Over the past few years, Congo has faced numerous problems such as grinding poverty, crumbling infrastructure, and a war in the east of the country that has dragged on for more than a decade. (Water Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

OTHER RESOURCES AND ARTICLES OF INTEREST

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: http://preparedness.dhmh.maryland.gov/

Maryland's Resident Influenza Tracking System: http://dhmh.maryland.gov/flusurvey

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NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a

professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

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Table: Text-based Syndrome Case Definitions and Associated Category A Conditions

Syndrome	Definition	Category A Condition
Botulism-like	ACUTE condition that may represent exposure to botulinum toxin ACUTE paralytic conditions consistent with botulism: cranial nerve VI (lateral rectus) palsy, ptosis, dilated pupils, decreased gag reflex, media rectus palsy. ACUTE descending motor paralysis (including muscles of respiration) ACUTE symptoms consistent with botulism: diplopia, dry mouth, dysphagia, difficulty focusing to a near point.	Botulism
Hemorrhagic Illness	SPECIFIC diagnosis of any virus that causes viral hemorrhagic fever (VHF): yellow fever, dengue, Rift Valley fever, Crimean-Congo HF, Kyasanur Forest disease, Omsk HF, Hantaan, Junin, Machupo, Lassa, Marburg, Ebola ACUTE condition with multiple organ involvement that may be consistent with exposure to any virus that causes VHF ACUTE blood abnormalities consistent with VHF: leukopenia, neutropenia, thrombocytopenia, decreased clotting factors, albuminuria	VHF
Lymphadenitis	ACUTE regional lymph node swelling and/ or infection (painful bubo- particularly in groin, axilla or neck)	Plague (Bubonic)
Localized Cutaneous Lesion	SPECIFIC diagnosis of localized cutaneous lesion/ ulcer consistent with cutaneous anthrax or tularemia ACUTE localized edema and/ or cutaneous lesion/ vesicle, ulcer, eschar that may be consistent with cutaneous anthrax or tularemia INCLUDES insect bites EXCLUDES any lesion disseminated over the body or generalized rash EXCLUDES diabetic ulcer and ulcer associated with peripheral vascular disease	Anthrax (cutaneous) Tularemia
Gastrointestinal	ACUTE infection of the upper and/ or lower gastrointestinal (GI) tract SPECIFIC diagnosis of acute GI distress such as Salmonella gastroenteritis ACUTE non-specific symptoms of GI distress such as nausea, vomiting, or diarrhea EXCLUDES any chronic conditions such as inflammatory bowel syndrome	Anthrax (gastrointestinal)

Syndrome Definitions for Diseases Associated with Critical Bioterrorism-associated Agents
(continued from previous page)

Syndrome	Definition	Category A Condition
Respiratory	ACUTE infection of the upper and/ or lower respiratory tract (from the oropharynx to the lungs, includes otitis media) SPECIFIC diagnosis of acute respiratory tract infection (RTI) such as pneumonia due to parainfluenza virus ACUTE non-specific diagnosis of RTI such as sinusitis, pharyngitis, laryngitis ACUTE non-specific symptoms of RTI such as cough, stridor, shortness of breath, throat pain EXCLUDES chronic conditions such as chronic bronchitis, asthma without acute exacerbation, chronic sinusitis, allergic conditions (Note: INCLUDE *acute exacerbation* of chronic illnesses.)	Anthrax (inhalational) Tularemia Plague (pneumonic)
Neurological	ACUTE neurological infection of the central nervous system (CNS) SPECIFIC diagnosis of acute CNS infection such as pneumoccocal meningitis, viral encephailitis ACUTE non-specific diagnosis of CNS infection such as meningitis not otherwise specified (NOS), encephailitis NOS, encephalopathy NOS ACUTE non-specific symptoms of CNS infection such as meningismus, delerium EXCLUDES any chronic, hereditary or degenerative conditions of the CNS such as obstructive hydrocephalus, Parkinson's, Alzheimer's	Not applicable
Rash	ACUTE condition that may present as consistent with smallpox (macules, papules, vesicles predominantly of face/arms/legs) SPECIFIC diagnosis of acute rash such as chicken pox in person > XX years of age (base age cut-off on data interpretation) or smallpox ACUTE non-specific diagnosis of rash compatible with infectious disease, such as viral exanthem EXCLUDES allergic or inflammatory skin conditions such as contact or seborrheaic dermatitis, rosacea EXCLUDES rash NOS, rash due to poison ivy, sunburn, and eczema	Smallpox
Specific Infection	ACUTE infection of known cause not covered in other syndrome groups, usually has more generalized symptoms (i.e., not just respiratory or gastrointestinal) INCLUDES septicemia from known bacteria INCLUDES other febrile illnesses such as scarlet fever	Not applicable

Syndrome Definitions for Diseases Associated with Critical Bioterrorism-associated Agents
(continued from previous page)

Syndrome	Definition	Category A Condition
Fever	ACUTE potentially febrile illness of origin not specified INCLUDES fever and septicemia not otherwise specified INCLUDES unspecified viral illness even though unknown if fever is present EXCLUDE entry in this syndrome category if more specific diagnostic code is present allowing same patient visit to be categorized as respiratory, neurological or gastrointestinal illness syndrome	Not applicable
Severe Illness or Death potentially due to infectious disease	ACUTE onset of shock or coma from potentially infectious causes EXCLUDES shock from trauma INCLUDES SUDDEN death, death in emergency room, intrauterine deaths, fetal death, spontaneous abortion, and still births EXCLUDES induced fetal abortions, deaths of unknown cause, and unattended deaths	Not applicable